

**Work Order ID 74650 -1**

Tuesday, October 04, 2011 3:23:48 PM



Page 1

Item ID: D6101-003

Revision ID:

Item Name: Saddle Billet, 7075

Start Date: 10/4/2011 Start Qty: 80.00

Required Date: 10/10/2011 Req'd Qty: 80.00

Reference:

Accept



Setup Start



Stop



Cust Item ID:

Customer:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

Draw Nbr

Revision Nbr

D6101

Rev B

100

0.00



Purchasing

PURCHASING

Memo

0.00

Purchasing

Issue P/O:

a) Description: Aluminum billet

b) 7.875" x 6.250" x 2.00" thick

c) Tolerance on all dimensions are +0.030"/-0.000"

d) Grain direction along 7.875" length

e) Material: 7075-T7351 (QQ-A-250/12)

f) Material certification required

110

0.00



Packaging

Receive &amp; Inspect for Damage &amp; Mat'l Certs

Memo

0.00

Packaging

Ensure material certification is attached

11-10-4  
80

Per 10/18 (21)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 74650**

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Item ID: D6101-003

Accept



Setup Start



Revision ID:

Stop



Item Name: Saddle Billet, 7075

Start Date: 10/4/2011 Start Qty: 80.00



Cust Item ID:

Required Date: 10/10/2011 Req'd Qty: 80.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

120

QC6- Inspect dimensions to drawing

0.00



QC

Memo

0.00

Quality Control

Ensure Material certification comply to Dwg D6101

*aml 11/10/19**21*

130

Identify as per dwg & Stock Location: *NAT44* 0.00

Packaging

Memo

0.00

Packaging

*aml 11/10/19**21*

140

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

*aml 11/10/19**aml 11-10-19*



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Tuesday, October 04, 2011 3:23:54 PM

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Work Order ID: 74650

Parent Item: D6101-003

Parent Item Name: Saddle Billet, 7075





Start Date: 10/4/2011

Required Date: 10/10/2011

Start Qty: 80.00

Required Qty: 80.00

Comments: IPP A: ☐01.05.04 ☐New Issue ☐EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6101-003P  7075-T7351 2X6.25X7.875		Purchased	No			110	Each	0.0000	1 	80		<i>Rev 10/18</i>	<i>FI</i>

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID PO15091

Purchase Order Date 10/4/2011

PO Print Date 10/4/2011

Page Number 1 of 1

Order From :

VC-MET001

METAUX CASTLE

A.M. CASTLE & CO. (CANADA) INC. - BOX B9204 PO BOX 9100

TORONTO, ON M4Y 3A5

CA

Contact Name

Vendor Phone

Vendor Fax

Vendor Account Nbr

514 694 9575

514 695 3281

Buyer

Requisition Nbr

Tax Resale Nbr

Terms

Currency

FOB

Brigitte Golden

10127-2607

Net 30

CAD

Destination-Collect

Ship To :

DART AEROSPACE LTD

1270 ABERDEEN

HAWKESBURY, ON K6A 1K7

CANADA

Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	D6101-001P	7075-T7351 2X6X6.25	10/7/2011 Yes	80.00 Each	Yours ppd	\$45.1000	\$3,608.00
		Special Inst:	Aluminum Billet 6.00 x 6.250 x 2.00" thick Tolerance on length are +0.030"/-0.000" E+/- 0.008" Grain direction along 6.00" length Mat: 7075-T7351 (QQ-A-250/12)				
2	D6101-003P	7075-T7351 2X6.25X7.875	10/7/2011 Yes	80.00 Each	Yours ppd	\$59.1600	\$4,732.80

Special Inst:

Aluminum Billet  
7.875 x 6.250 x 2.00" thick  
Tolerance on all dimensions are +0.030"/-  
0.000  
Grain direction along 7.875" length  
Mat: 7075T7351 (QQ-A-250/12)

PO Total:

\$8,340.80

Change Nbr:

1

Change Date:

10/4/2011

No substitution or deviation without  
consent.  
Certificate of Conformity or Material  
Certification required when applicable







A227290



Castle Metals®

A. M. Castle &amp; Co.

21x6.25x7.875  
INTERORG TRANSFER  
PACKING SLIP

SH3 PRI

R

Page 1 of 1

Shipment No: 1022881

10/20

<b>Ship From:</b> A. M. Castle & Co. (Canada) Inc. TORONTO 2150 ARGENTIA ROAD MISSISSAUGA, ON L5N 2K7		<b>Sold To:</b> DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA		<b>Ship To:</b> A. M. Castle & Co. (Canada) Inc. MONTREAL 835-SELKIRK AVENUE POINTE CLAIRE, QUEBEC H9R 3S2 CAN		<b>Deliver To:</b> DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	
<b>Date Shipped</b> 14-OCT-2011	<b>F.O.B.</b> ORIGIN	<b>Freight Terms</b> Prepaid		<b>Carrier</b> WHITE OAK TRANSPORT LIMITED		<b>BOL No</b> 1022881-2	

<b>Shipment Details</b>	<b>Final Destination Branch - MON</b>
-------------------------	---------------------------------------

Order No	Line No	Item No	Description				
1755674	2	752237.MO	2.0000.PL.7075.T7351.ALUMINUM.US1.48.5000.144.5000 CUT 2SIDED TO 6.25 IN ( + .0310/- .0000 IN (GRAIN TO RUN ALONG 7.875")) X 7.875 IN ( + .0310/- .0000 IN (GRAIN TO RUN ALONG 7.875")) - ALUMINUM PLATE SAW SPECIFICATIONS: QQ-A-250/12 OR				
Purchase Order No		Part Number		Ordered Qty		Invoice Qty	
15091		YOUR ITEM NUMBER: D6101-003		21.00 PCS		21 PCS	
Details							
Delivery No.	Mill	Heat Number	Mech Id	PCS	Width (IN)	Length (IN)	Shipped Qty(LBS)
98891428		481830A8		21			213.38

These commodities/technologies are subject to US Export Administration & US State Dept. Regulations and, if intended for export, were/are exported thereunder. Diversion contrary to US Law is Prohibited.

We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned for credit.

Reviewed by Authorized Castle Metals Representative:

Date:

Name:



# KAISER ALUMINUM FABRICATED PRODUCTS

**CERTIFIED TEST REPORT**  
http://Certs.KaiserAluminum.com

Kaiser Aluminum  
Trentwood Works  
Spokane, WA 99205-5108  
(800) 367-2586

CUSTOMER PO NUMBER: 20985		WORK PACKAGE:		CUSTOMER PART NUMBER: 6857 AMC A97075-60		PRODUCT DESCRIPTION: Sawed Plate	
KAISER ORDER NUMBER: 1088788	LINE ITEM: 1	SHIP DATE: 10/27/2009	ALLOY: 7075		CLAD: BARE	TEMPER: T7351	
WEIGHT SHIPPED: 25956 LB	QUANTITY: 18 PCS EST.	B/L NUMBER: 2024599	GAUGE: 2.0000 IN		WIDTH: 48.500 IN	LENGTH: 144.500 IN	
SHIP TO:  CASTLE % CASTLE AEROSPACE 3050 SOUTH HYDRAULIC WICHITA, KS 67216 US				SOLD TO:  CAS AERO%AM CASTLE METALS ATTN: BOB OHR %ACCTS PAYABLES 3400 NORTH WOLF ROAD FRANKLIN PARK, IL 60131 US			

## Certified Specifications

AMS 4078/RevG AMS-QQ-A-250/12 AMS-STD-2154 ASTM B 209/Rev07 ASTM B 594/Rev06 BAC  
5439/RevH BSS 7055/RevA CMMP 025/RevS CSTI 006/RevC DPS 4.713/RevAH GAMPs 9101/RevB  
GSSI6100/RevG/Amd1 MMS 159/RevN PS 21211/RevK

Test Code: 4297

## Test Results:

LOT: 481799A5 CAST: 267 DROP: 92 INGOT: 2

(ASTM E8/B557)

(EN 2002-1)

Tensile: Temper	Dir/#Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
T7351	LT / 02 (Min:Max)	73.9 : 74.2 (510 : 512)	63.0 : 63.2 (434 : 436)	11.5 : 11.8

(ASTM E1004)

(EN 2004-1)

Conductivity %IACS:	40.1 Min	40.4 Max
(MS/M):	23.3 Min	23.4 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.10	0.19	1.4	0.06	2.5	0.19	5.6	0.02	0.01	0.01	TOT 0.05

## CERTIFICATION

Kaiser Aluminum Fabricated Products, LLC (Kaiser) hereby certifies that metal shipped under this order was melted in the United States of America or a qualifying country per DEARS 225.072-1(a), was manufactured in the United States of America, and meets the requirements of DEARS 252.225 for domestic content. This material has been inspected, tested and found in conformance with the requirements of the applicable specifications as indicated herein. All metal which is solution heat treated complies with AMS 2772. Any warranty is limited to that shown on Kaiser's standard general terms and conditions of sale. Test reports are on file, subject to examination. Test reports shall not be reproduced except in full, without the written approval of Kaiser Aluminum Fabricated Products, LLC laboratory. The recording of false, fictitious or fraudulent statements or entries on the certificate may be punished as a felony under federal law. ISO-9001:2000 certified.

BILL POYNOR, LABORATORIES SUPERVISOR

*Bill Poy*

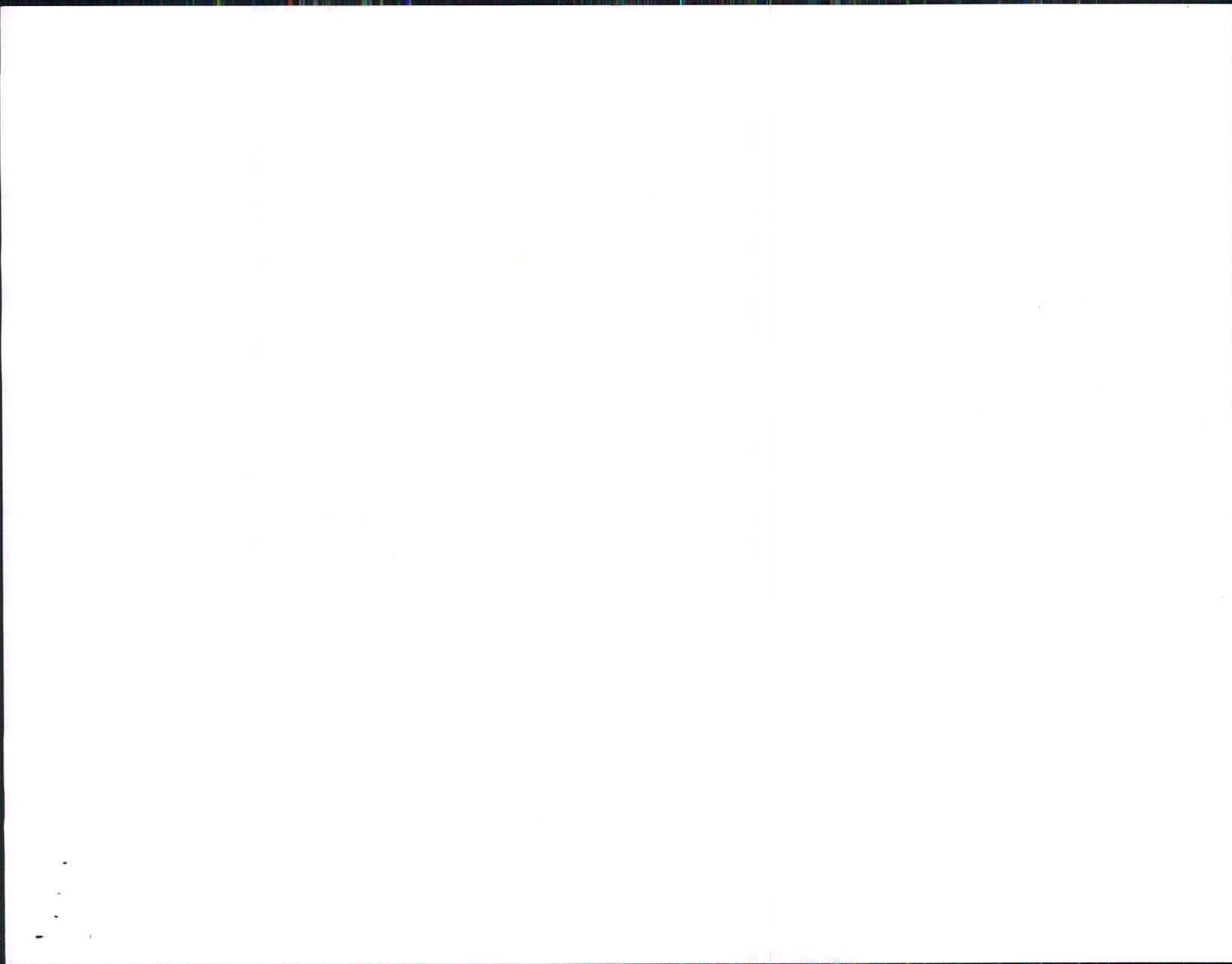
Plant Serial: 4175120

Kaiser Order Number: 1088788

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Line Item: 1







# KAISER ALUMINUM FABRICATED PRODUCTS

**CERTIFIED TEST REPORT**  
<http://Certs.KaiserAluminum.com>

Kaiser Aluminum  
Trentwood Works  
Spokane, WA 99205-5108  
(800) 367-2586

LOT: 481828A2 CAST: 267 DROP: 91 INGOT: 4

(ASTM E8/B557)

(EN 2002-1)

Tensile: Temper	Dir/#Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
T7351	LT / 02 (Min:Max)	74.3 : 74.4 (512 : 513)	62.3 : 63.2 (430 : 436)	11.7 : 12.0

(ASTM E1004)

(EN 2004-1)

Conductivity %IACS:	40.4 Min	40.7 Max
(MS/M):	23.4 Min	23.6 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.11	0.21	1.5	0.07	2.5	0.20	5.6	0.02	0.01	0.01	TOT 0.05

LOT: 481830A8 CAST: 267 DROP: 95 INGOT: 2

(ASTM E8/B557)

(EN 2002-1)

Tensile: Temper	Dir/#Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
T7351	LT / 02 (Min:Max)	75.4 : 75.5 (520 : 521)	64.7 : 65.1 (446 : 449)	11.2 : 11.4

(ASTM E1004)

(EN 2004-1)

Conductivity %IACS:	40.3 Min	40.3 Max
(MS/M):	23.4 Min	23.4 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.10	0.22	1.5	0.09	2.5	0.19	5.9	0.02	0.01	0.01	TOT 0.06

## CERTIFICATION

Kaiser Aluminum Fabricated Products, LLC (Kaiser) hereby certifies that metal shipped under this order was melted in the United States of America or a qualifying country per DFARS 225.072-1(a), was manufactured in the United States of America, and meets the requirements of DFARS 252.225 for domestic content. This material has been inspected, tested and found in conformance with the requirements of the applicable specifications as indicated herein. All metal which is solution heat treated complies with AMS 2772. Any warranty is limited to that shown on Kaiser's standard general terms and conditions of sale. Test reports are on file, subject to examination. Test reports shall not be reproduced except in full, without the written approval of Kaiser Aluminum Fabricated Products, LLC laboratory. The recording of false, fictitious or fraudulent statements or entries on the certificate may be punished as a felony under federal law. ISO-9001:2000 certified.





# KAISER ALUMINUM FABRICATED PRODUCTS

*Bill Poynor*

**CERTIFIED TEST REPORT**  
http://Certs.KaiserAluminum.com

Kaiser Aluminum  
Trentwood Works  
Spokane, WA 99205-5108  
(800) 367-2586

LOT: 481995A9 CAST: 267 DROP: 90 INGOT: 4

(ASTM E8/B557)  
(EN 2002-1)

Tensile: Temper	Dir/#Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
T7351	LT / 02 (Min:Max)	75.7 : 76.3 (522 : 526)	65.2 : 65.7 (450 : 453)	11.7 : 11.8

(ASTM E1004)  
(EN 2004-1)

Conductivity %IACS:	40.3 Min	40.4 Max
(MS/M):	23.4 Min	23.4 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.10	0.19	1.6	0.08	2.5	0.19	6.0	0.02	0.01	0.01	TOT 0.05

LOT: 489687A4 CAST: 267 DROP: 97 INGOT: 1

(ASTM E8/B557)  
(EN 2002-1)

Tensile: Temper	Dir/#Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
T7351	LT / 02 (Min:Max)	76.0 : 76.1 (524 : 525)	64.7 : 65.1 (446 : 449)	11.3 : 11.7

(ASTM E1004)  
(EN 2004-1)

Conductivity %IACS:	39.4 Min	39.6 Max
(MS/M):	22.9 Min	23.0 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.10	0.20	1.5	0.11	2.6	0.19	5.8	0.02	0.01	0.01	TOT 0.04

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
7075	MIN	0.00	0.00	1.2	0.00	2.1	0.18	5.1	0.00	0.00	MAX 0.05
	MAX	0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	TOT 0.15

Aluminum Remainder

## CERTIFICATION

Kaiser Aluminum Fabricated Products, LLC (Kaiser) hereby certifies that metal shipped under this order was melted in the United States of America or a qualifying country per DFARS 225.872-1(a), was manufactured in the United States of America, and meets the requirements of DFARS 252.225 for domestic content. This material has been inspected, tested and found in conformance with the requirements of the applicable specifications as indicated herein. All metal which is solution heat treated complies with AMS 2772. Any warranty is limited to that shown on Kaiser's standard general terms and conditions of sale. Test reports are on file, subject to examination. Test reports shall not be reproduced except in full, without the written approval of Kaiser Aluminum Fabricated Products, LLC laboratory. The recording of false, fictitious or fraudulent statements or entries on the certificate may be punished as a felony under federal law. ISO-9001:2000 certified.

BILL POYNOR, LABORATORIES SUPERVISOR

*Bill Poynor*

Plant Serial: 4175120

Kaiser Order Number: 1088788

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Line Item: 1







# KAISER ALUMINUM FABRICATED PRODUCTS

Kaiser Aluminum  
Trentwood Works  
Spokane, WA 99205-5108  
(800) 367-2586

CERTIFIED TEST REPORT  
<http://Certs.KaiserAluminum.com>

## Miscellaneous Notes

7075-T7351 plate 3.501-4.000 thick, if ultrasonically inspected, meets requirements of CMMP025 per SDR CMMP025-KaiserT-3. 7075-T7351 plate 4.001-5.000 thick, if ultrasonically inspected, meets requirements of CMMP025 per SDR CMMP025-KaiserT-2.

Metal represented by this test report was immersion ultrasonically tested from one side and meets the Class A and Class B requirements of all specifications referenced on this test report.

## CERTIFICATION

Kaiser Aluminum Fabricated Products, LLC (Kaiser) hereby certifies that metal shipped under this order was melted in the United States of America or a qualifying country per DFARS 225.872-1(a), was manufactured in the United States of America, and meets the requirements of DFARS 252.225 for domestic content. This material has been inspected, tested and found in conformance with the requirements of the applicable specifications as indicated herein. All metal which is solution heat treated complies with AMS 2772. Any warranty is limited to that shown on Kaiser's standard general terms and conditions of sale. Test reports are on file, subject to examination. Test reports shall not be reproduced except in full, without the written approval of Kaiser Aluminum Fabricated Products, LLC laboratory. The recording of false, fictitious or fraudulent statements or entries on the certificate may be punished as a felony under federal law. ISO-9001:2000 certified.

BILL POYNOR, LABORATORIES SUPERVISOR

*Bill Poy*

Plant Serial: 4175120

Kaiser Order Number: 1088780

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